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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/735,983	12/13/2000	Seth Haberman	20429/10	5697
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WILMER CUTLER PICKERING HALE AND DORR LLP 399 PARK AVENUE NEW YORK, NY 10022			EXAMINER TRAN, HAI V	
			ART UNIT	PAPER NUMBER
			2623	
SHORTENED STATUTORY PERIOD OF RESPONSE		NOTIFICATION DATE	DELIVERY MODE	
3 MONTHS		04/12/2007	ELECTRONIC	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 04/12/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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**Office Action Summary**

Application No.

09/735,983

Applicant(s)

HABERMAN ET AL.

Examiner

Hai Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 4,5,10 and 16-18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,6-9 and 11-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>all</u> .   | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Response to Amendment*

Applicant's arguments filed 01/03/2007 have been fully considered but they are not persuasive.

Applicant argues, page 9, lines 19-page 10, lines 4, "...Because Hurst's approach requires additional buffers and monitors data streams for in and out points as they are received, Hurst cannot prepare the data streams prior to transmitting them to a receiver."

In response, the Examiner respectfully disagrees with Applicant because Hurst, at least monitors data streams for in and out points as they are received, as Applicant's self-admitted. Thus, Hurst clearly prepares the data streams prior to transmitting them to a receiver.

Applicant further argues, "The splicer of Hurst would need to be built and deployed for every household with a receiver, where the splicer monitors the data stream as they are transmitted to the receiver."

In response, the Examiner respectfully disagrees with Applicant because Applicant again misconstrues Hurst's reference. The Examiner asserts that Hurst's process is done at the headend and not at the receiver, as alleged by Applicant and thus Hurst does not need to build and deploy his splicer for every household with a receiver. The Examiner cites Col. 4, lines 65-67 to support, "The splicer 300 selectively couples one of the two input transport streams S6, S7 to a **transmitter** or other subsystem as an output stream S9."

Applicant argues, page 11, lines 6-17, "...Because Zhang splices bit stream in real-time, Zhang fails to show or suggest preparing a plurality of data stream prior to transmitting the plurality of data streams to the receiver. Thus, Zhang also cannot show or suggest transmitting the multiplexed data streams to the receiver after preparing the plurality of data streams, as required by Applicants' independent claims."

In response to Applicant's arguments against the references individually, one cannot show non-obviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

In this instant, Hurst meets preparing a plurality of data streams prior to transmitting the plurality of data stream to the receiver

Applicant further argues, "changing the multiplexing of said plurality of streams, wherein such changing of multiplexing does not affect the contents of said plurality of data streams....Unlike applicant's approaches, Zhang clearly discloses that it physically changes the contents of the data streams by re-encoding the streams."

In response, the Examiner respectfully disagrees with Applicant because it is unclear how a "content" of a video stream could be changed by re-encoding it, for example a content of a video program is encoded with MPEG-2 standard, one ordinary skill in the art would know that the content of the encoded video program does not change because by decoding the encoded video stream, the encoded content should

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be recovered to its initial state before the encoding process! As such, the Examiner asserts that Zhang does not change the content of data streams by re-encoding the streams (see Col. 12, lines 17-30).

As such, the Examiner maintains the rejection.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-3, 6-9, and 12-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hurst Jr. (US 6038000) in view of Zhang et al. (US 6611624).

Claim 1, Hurst discloses a method of preparing a plurality of data streams to allow seamless switching between said data streams by a switching device, wherein said switching device includes data stream buffering for an output data stream, said method comprising the steps of (Col. 2, lines 63-Col. 3, lines 65+):

Preparing the plurality of data streams prior to transmitting the plurality of data streams switching device (see Fig. 1 and Fig. 3 in which S6 and S7 streams are prepared ahead of time in corresponding work buffer 330A and 330B prior to the switch 350), wherein the preparing comprises:

providing a plurality of data streams (Source 1 and 2 of Fig. 1), said data streams including data which is divided into segments, wherein said segments include synchronized starting points and end points on all of said plurality of data streams (Col. 3, lines 14-Col. 4, lines 3 and Col. 5, lines 30-56);

increasing a data rate (320A is flushed) of said plurality of data streams at a time before an end point of a segment (Fig. 2, Col. 11, lines 3-11); and

providing gaps in said plurality of data streams between said end points (out point) and said starting points (in-point) (Fig. 5A-C; Col. 18, lines 48-60).

After preparing the plurality of data streams, transmitting the multiplexed data stream to the switching device (see Fig. 1 and Fig. 3 in which S6 and S7 streams are prepared ahead of time in corresponding work buffer 330A and 330B prior to the switch 350; see Col. 4, lines 65-67).

Hurst does not clearly disclose, "multiplexing said plurality of data streams to said switching device" and "increasing a data rate of the plurality of data streams by changing the multiplexing for said plurality of data streams wherein such changing of multiplexing does not affect the contents of the plurality of data streams."

Zhang discloses pluralities of data streams are multiplexed to said switching device and increasing a data rate of the plurality of data streams by changing the multiplexing for said plurality of data streams wherein such changing of multiplexing does not affect the contents of the plurality of data streams (Col. 11, lines 43-Col. 12, lines 30. Note: the "content" of the encoded video program does not change

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because the "content" of the encoded video program should be recovered to its initial state after the decoding process).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hurst with Zhang so that the overall bit rate of the multiplex fits within the available bandwidth.

Claim 2, Hurst further discloses including the step of inserting trigger gap indicators in said plurality of data streams proximate said end points is further met by Hurst because Hurst must insert trigger gap indicators (black-screen or time-related decision or event) so the system could detect and a splice a decision could be made at the end of the from stream (Col. 6, lines 9-36).

Claim 3, Hurst does not clearly disclose "wherein the step of increasing a data rate includes increasing a bandwidth of said plurality of data streams."

Zhang discloses wherein the step of increasing a data rate includes increasing a bandwidth of said plurality of data streams (Col. 12, lines 10-25). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hurst with Zhang so the decoder buffer does not overflow or underflow, regardless whether it is at splicing point or before/after the splicing.

Claim 6, Hurst does not clearly disclose, "wherein the step of increasing a data rate includes compressing said data of said plurality of data streams."

Zhang discloses wherein the step of increasing a data rate includes compressing said data of said plurality of data streams by recoding (bit reduction) on all video programs (Col. 11, lines 44-Col. 12, lines 30). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hurst with Zhang so to shape the bit stream rate of the streams to fit within the available bandwidth.

Claim 7, Hurst further discloses wherein said plurality of data streams include multimedia data streams (video see Col. 16, lines 25-65+, audio see Col. 17, lines 53-65+ and auxiliary data see Col. 19, lines 35-65+).

Claim 8, Hurst further discloses wherein said plurality of data streams include MPEG-2 encoded data streams (Col. 2, lines 53-65+).

Claim 9, Hurst further discloses wherein said plurality of data streams are multiplexed in an MPEG-2 transport stream (Col. 21, lines 15-24).

Claim 12 Hurst further discloses the step of switching from one of said plurality of data streams to another one of said plurality of data streams at an end point of a segment by said switching device (Fig. 3).

Claim 13, Hurst discloses A system for preparing a plurality of data streams for transmission to allow a receiver receiving said transmitted data streams to seamlessly switch between said transmitted data streams (Fig. 1; Col. 2, lines 43-65+); said system comprising:



a content preparation component (Fig. 1 not shown but inherent), coupled to a source of said plurality of data streams (Compressed Bit stream Source 1 and 2), to prepare and encode content in said plurality of data streams with synchronized starting points and end points common to all of said plurality of data streams prior to transmitting the plurality of data streams to the receiver (Col. 3, lines 14-Col. 4, lines 3 and Col. 5, lines 30-56);

a gap creation component (Fig. 1, not shown but inherent in order to perform as disclosed), coupled to said content preparation component, said gap creation component to insert gaps in said plurality of data streams between said end points (Out-Point) and said starting points (In-Point) (Fig. 5A-C; Col. 18, lines 48-60).

a data rate control component (Fig. 1, not shown but inherent), coupled to said gap creation component, to dynamically control data rates of said plurality of data streams (Fig. 2, Col. 11, lines 3-11);.

Hurst does not clearly disclose the plurality of data streams for transmission is prepared by a multiplexed transport stream and "to dynamically control data rates of the plurality of data streams wherein such changing of multiplexing does not affect the contents of the plurality of data streams; and wherein the data rate control component increases the data rate of the multiplexed data streams at a time before an end point of a segment and instructs the gap creating component to insert gaps in the plurality of data streams between the end points and the starting points."

Zhang discloses pluralities of data streams are multiplexed into multiplexed transport stream to said witching device and increasing a data rate of the plurality of

data streams by changing the multiplexing for said plurality of data streams wherein such changing of multiplexing does not affect the contents of the plurality of data streams and wherein the data rate control component increases the data rate of the multiplexed data streams at a time before an end point of a segment and instructs the gap creating component to insert gaps in the plurality of data streams between the end points and the starting points (Col. 11, lines 43-Col. 12, lines 30. Note: the "content" of the encoded video program does not change because the "content" of the encoded video program should be recovered to its initial state after the decoding process).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hurst with Zhang so that the overall bit rate of the multiplex fits within the available bandwidth.

Claim 14, "trigger insertion component (not shown but inherent), coupled to said data rate control component, said trigger insertion component to insert trigger messages into said plurality of data streams" is further met by Hurst because Hurst must insert trigger gap indicators (black-screen or time-related decision or event) so the system could detect the event in which a splicing decision could be made at the end (out-point) of the from stream (Col. 6, lines 9-36).

Claim 15, Hurst further discloses wherein said plurality of data streams are transmitted using an MPEG-2 compliant transport stream, and said data rate control component controls data rates of said data streams in said transport stream (Col.

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2, lines 50-62; Col. 3, lines 23-65; Col. 12, lines 44-56; Col. 13, lines 4-25; Col. 14, lines 63-Col. 15, lines 21 and Col. 16, lines 25-65+).

2. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hurst.

Claim 11, Hurst does not clearly disclose, "wherein said plurality of data streams include AC3 encoded data streams."

Official notice is taken that the use of AC3 encoder for encoding audio data is well known in the art, i.e., Dolby surround sound. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Hurst to use an AC3 encoder so to take the advantage of the most widely adopted high-end audio signal compression technique of AC-3 multi-channel high-fidelity audio signal compression invented by Dolby Inc.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hai Tran whose telephone number is (571) 272-7305. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher S. Kelley can be reached on (571) 272-7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HT:ht  
03/30/2007

  
HAI TRAN  
PRIMARY EXAMINER